

CONTROL SLIP FOR OFFICE OF EXECUTIVE CORRESPONDENCE

CONTROL NO : AX9312220

DUE DATE: / /

FROM : MCCOLLUM, H. R.
UNITED STATES STEEL

CORRES. DATE: 11/11/93
RECEIVED: 11/15/93

ASSIGNED: 12/06/93

SALUTATION : DEAR MR. MCCOLLUM

CLOSED : / /

CONSTITUENT :

SUBJECT : COMMENTS- COKE OVEN NESHAPS ELECTION OF COMPLIANCE DATE OF
EXTENSION

SIGNATURE : NECESSARY ACTION

COURTESY COPIES:

ADMINISTRATOR

DEPUTY ADMINISTRATOR

ASSIGNED : REGION 03

INSTRUCTIONS: NECESSARY ACTION. IF REPLY IS PREPARED, SEND COPY TO AX.

IMS: SRG



U. S. Steel
Clairton Works
400 State Street
Clairton, PA 15025-1855

November 11, 1993

Ms. Carol Browner
Administrator, United States
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

RECEIVED

DEC 20 1993

SUBJECT: Coke Oven Battery NESHAP
Notification of Election to Meet Emission Limits

AIR ENFORCEMENT BRANCH
EPA Region III

Dear Ms. Browner:

Pursuant to 40 CFR §63.311(c)(2)(i), U.S. Steel Group, a Unit of USX Corporation, elects to follow the "straddle" track for the below listed batteries at U.S. Steel's Clairton Works in Clairton, Pennsylvania. U.S. Steel intends to meet the emissions limitations in §63.304(b)(1) [the 11/15/93 LAER extension track], in addition to the limitations in §63.302(a).

This notification is for the batteries at Clairton Works listed below:

Battery Number 1	Battery Number 2	Battery Number 3	Battery Number 7
Battery Number 8	Battery Number 9	Battery Number 13	Battery Number 14
Battery Number 15	Battery Number 19	Battery Number 20	Battery Number B

Please call me at (412) 233-1101 if you have any questions concerning this notification.

Very truly yours,

H. R. McCollum
H. R. McCollum
Manager, Environmental Control

HRM/kb-93455

cc: M. Ioff, EPA III
J. Pezze, PaDER
R. Chleboski, Allegheny County DEQ
R. Dworek

U. S. Steel Group
A unit of USX Corporation



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U. S. Steel
Clairton Works
400 State Street
Clairton, PA 15025-1855

November 11, 1993

Ms. Carol Browner
Administrator, United States
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

SUBJECT: Coke Oven Batteries NESHAP
Submittal of Work Practices Plan

Dear Ms. Browner:

Pursuant to 40 CFR §63.306(a), enclosed find the Work Practice Plans for the below listed batteries at the Clairton Works of U.S. Steel Group, a Unit of USX Corporation, in Clairton, Pennsylvania:

Battery Number 1	Battery Number 2	Battery Number 3	Battery Number 7
Battery Number 8	Battery Number 9	Battery Number 13	Battery Number 14
Battery Number 15	Battery Number 19	Battery Number 20	Battery Number B

Please call me at (412) 233-1101 if you have any questions concerning this submittal.

Very truly yours,

H. R. McCollum
Manager, Environmental Control

HRM/kb-93456

cc: M. Ioff, EPA III
J. Pezze, PaDER
R. Chleboski, Allegheny County DEQ
R. Dworek



USS Clairton Works

COKE OVEN BATTERY

NESHAPS Work Practices Plan

Battery #1

Battery #2

Battery #3

Battery #7

Battery #8

Battery #9

Battery #13

Battery #14

Battery #15

Battery #19

Battery #20

November 12, 1993

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I. TRAINING

Job Training at Clairton Works encompasses several areas in addition to environmental compliance. Before working on any battery, employees receive initial training which includes lectures, discussions, and video-taped presentations on rules, safety, and procedures. The initial training is then extended to include on-the-job training in routine job duties and in following Safe Job Procedures (SJPs). Additional training that is deemed necessary to achieve environmental compliance may be administered.

Training has been developed to provide personnel with practical instruction about the coking process and the relationship between individual job responsibilities and the environment.

Supplemental training will be required if an auditor reports significant deviations from prescribed procedures.

A. Job Title/Emission Points

The following is a list of coke battery job titles for personnel who perform functions directly associated with the control of emissions that may originate from coke oven doors, charging operations, and leakage from oven lids and offtakes. Each job has its own functions which are directly related to specific emission points.

1. Pusher Machine Operator
 - a. Pusher Side Doors
 - b. Charging
2. Larry Car Operator
 - a. Charging
 - b. Offtakes
3. Door Machine Operator
 - a. Coke Side Doors
4. Lidman
 - a. Lids
 - b. Offtakes
 - c. Charging
5. Door Cleaner
 - a. Pusher Side Doors
6. Sprayman
 - a. Offtakes
 - b. Charging
7. Battery Laborer
 - a. Offtakes
 - b. Lids

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- 8. Door Coordinator
 - a. Pusher Side Doors
 - b. Coke Side Doors

B. Subject Areas for Initial/Refresher Training

The following outline lists the written procedures that are used for initial and refresher training:

Note: There are two types of written procedures:

1. Safe Job Procedures (SJP)- written procedures which include all job activities and emphasize the hazards
2. Standard Operating Procedure (SOP)- written procedures describing how to do the job correctly including procedures that limit emissions.

1. Pusher Machine Operator
 - a. pusher side doors
 - * SJP P-2 Remove and Replace Oven Doors
 - * SJP P-5 Cleaning Jambs, Doors, Latches, Deflectors
 - * SJP P-6 Positioning Ram for Door Cleaner to Cut Hearth Carbon
 - b. charging
 - * SJP P-3 Leveling Ovens
 - c. offtakes
 - * SJP P-4 Pushing Ovens
2. Larry Car Operator
 - a. charging
 - * SJP LC-1 Operation of Larry Car
 - * SJP LC-2 Cleaning Goosenecks, Standpipe Caps, etc
 - * SJP LC-4 Relieving Excessive Pressure on an Oven During or After a Charge
 - * SOP-LC2 Larry Car Loading
 - b. offtakes
 - * SJP LC-2 Cleaning Goosenecks, Standpipe Cap, etc.
 - * SJP LC-4 Relieving Excessive Pressure on an Oven During or After a Charge
 - * SJP LC-9 Sealing Caps
 - * SOP-LC3 Offtake Preparation
3. Door Machine Operator
 - a. coke side doors
 - * SJP DM-1 Cleaning Doors
 - * SJP DM-2 Remove and Replace Doors from Ovens or Racks
 - * SJP DM-9 Using Automatic Door Cleaner
 - * SJP DM-10 Using Automatic Jamb Cleaner

* SOP-DM2 Manual Door Cleaning

4. Lidman

a. Lids

- * SJP L-5 Replacing Lids During Charging
- * SJP L-6 Removing Lids
- * SJP L-12 Reseal Oven Lids
- * SJP SOP-L1 Inspection and Cleaning

b. Offtakes

- * SJP L-3 Dampering Off Oven
- * SJP L-4 Dampering Ovens On

c. Charging

- * SJP L-1 Stage Charging Sequence
- * SJP L-2 Signaling Larryman
- * SJP L-4 Dampering Ovens On

5. Door Cleaner

a. Pusher Side Doors

- * SJP DC-1 Cleaning Jambs and Sills
- * SJP DC-2 Cleaning Pusher Side Doors
- * SJP DC-3 Cleaning Hearth Plates

6. Sprayman

a. oftakes

- * SOP-1 Flushing and Collector Main

b. charging

- * SJP BL-20 Reaming Out Steam Sprays

7. Battery Laborer

a. oftakes

- * SJP BL-38 Sealing Standpipe Caps

b. lids

- * SJP BL-40 Resealing Lids

8. Door Coordinator

a. doors (PS and CS)

- * SJP P-9 Chuck Door Sealing
- * SJP DC-3 Cleaning Hearth Plates

C. Training Methods/Duration

The initial training includes safety information and on-the-job training. Refresher training includes a review of Safe Job Procedures or other training deemed to be necessary.

It is difficult to allocate the time spent in training to environmental compliance because training in control of emissions is an integral part of total job training.

1. Initial Training

Indoctrination Period

When first assigned to the Coking Department, personnel receive at least 24 hours of initial classroom type training. During this training, the employee will receive basic information such as:

- a. the importance of OSHA required apparel
- b. "General Safety & Plant Conduct Rule Book"
- c. "Lockout/Tryout" Rules
- d. description/explanation of safety program
- e. gas rescue training
- f. Safety videos
- g. Material Safety Data Sheets (MSDS)
- h. Safe Job Procedures (SJP)
- i. Standard Operating Procedures (SOP)

Break-in Period

The initial training is then extended to include on-the-job training in the routine job duties and in following Safe Job Procedures and Standard Operating Procedures (SOP). The employee is assigned an initial work area and job (usually Door Cleaner and/or Lidman). To become qualified at a particular job, the person works along side an experienced worker and then by himself to demonstrate his ability to properly perform the job. During the qualification period, the first line supervisor observes the worker to assure that he is following procedures that promote safety and environmental compliance. Other positions require similar break-in training and qualification periods.

When the employee has completed the qualification period, he is then assigned to a crew on one of the battery units.

Duration:

(the estimated time spent on training in environmental compliance is enclosed in parenthesis)

a) initial indoctrination:

The duration of the initial indoctrination period is between 24 and 40 hours. (4 to 10 hrs)

b) Break in Period "on-the-job training":

The duration of the Break-in period is different for the different positions.

Position	Minimum Training Hrs.	Estimate of Environmental Compliance Training Hrs.
Door Cleaner	16	(3-6)
Lidman	40	(12-15)
Larry Car Operator	24	(10-18)
Door Machine Operator	24	(10-15)
Pusher Machine Operator	24	(10-15)
Battery Laborer	8	(3-4)
Sprayman	16	(5-6)
Door Coordinator	24	(15-20)

Typically, employees have several years of experience in other positions before moving to a machine operator position.

2. Refresher Training-

To maintain awareness of job requirements, each employee is re-instructed in aspects of his job. Each week the first line supervisor meets individually with his crew members to review selected Safe Job Procedures. This instruction is then re-enforced by observing the employee as he performs his job.

Additional training may be required if the employee is not performing satisfactorily.

Safe Job Procedures (SJPs) are reviewed with all battery personnel. The first line supervisor reviews at least one procedure a week with each of his employees. These procedures, while highlighting job hazards, also assure that employees understand the best procedures for environmental compliance.

Duration:	Estimate of Training	Estimate of Environmental Compliance Training Hrs.
Refresher Training	6-8 hrs/year	(2-4 hrs/year)

D. Demonstration of Successful Completion of Training

A record of both initial and refresher training that has been given to each employee is maintained by the first line supervisor. These records are dated and initialed by the first line supervisor.

E. Procedure to Document Performance of Plan Requirements

To document performance of plan requirements pertaining to the daily operation of the battery and its emission control equipment, the first line supervisor will record reported exceptions to plan requirements on the "Shift Report" (exhibit W-1). The first line supervisor will sign this report.

I. DOOR EMISSION CONTROL WORK PRACTICES PLAN

Doors on batteries at USS Clairton Works are considered self-sealing. On the coke side, the Door Machine Operator uses automatic door and jamb cleaners. On the pusher side, the Door Cleaner is responsible for manually cleaning doors and jambs.

A. Inspection and Cleaning of Doors and Jambs

1. Inspection of Oven Doors and Jambs

Oven doors and jambs are to be inspected for defects which may cause problems with the door sealing system.

- a. The oven door and door jamb is to be visually inspected by the Door Cleaner on the pusher side and the Door Machine Operator on the coke side after the oven is pushed.
- b. The oven wall and lintel is to be inspected by the Door Cleaner and Pusher Machine Operator after each push.
- c. Visible defects are to be brought to the attention of the first line supervisor by the Door Cleaner, Door Machine Operator or the Pusher Machine Operator.
- d. The Pusher Machine Operator is to inspect chuck doors and jambs for defects before the oven is charged. Defects are to be reported to the first line supervisor.
- e. The first line supervisor is to either direct immediate remedial action or record the problem for later action on the "Daily Report" ("Six O'Clock Report") exhibit W-2, which is then distributed to appropriate operating and maintenance management.

2. Cleaning of Oven Doors and Jambs

The door and jamb will be cleaned after each coking cycle.

The coke side of Clairton batteries are equipped with mechanical cleaners. If the cleaners are inoperable for any reason, the doors and jambs will be cleaned manually.

a. Pusher Side Door Cleaning Procedure

1. Pusher Machine Operator removes the door and moves to align for leveling.
2. The Door Cleaner cleans the door gas channel, jamb surface, retainer, door plug, and sill plate by manually scraping and removing carbon and tar deposits.
3. Cleaning not finished before the leveling operation can be completed after the ram is spotted for the push.
4. Laborers will be utilized as necessary to cut hearth

- and inside jamb carbon.
- 5. The P.M.O. is to clean the top of the jamb and the retainer down to the first lug and the gas channel of the top of the door down to the bottom of the chuck door casting.
- 6. Every chuck door jamb and sealing edge must be cleaned.
- 7. The Door Cleaner cleans the hearth plate of coke debris to allow the door to be properly seated.

b. Coke Side Door Cleaning Procedure

- 1. The Door Machine Operator is responsible for removing the door, positioning it in front of the cleaner, and operating the automatic cleaner.
 - 2. The operator moves the door machine to spot up and initiates the automatic jamb cleaner.
3. Conformance with specifications
- a. The routine inspection of the door sealing system will be conducted by the Pusher Machine Operator, Door Cleaner, and/or the Door Machine Operator. This inspection may include the visual inspection of cleanliness, excessive wear, and physical damage.
 - b. A problem door or jamb which has been identified by either poor performance or a report of a visible defect is to be inspected more thoroughly by the first line supervisor or Door Coordinator. This inspection may include taking physical measurements to determine the remedial action required.
4. Recording and Certification (Cleaning and Inspection)

Certification of inspection and cleaning practices for doors and jambs will be accomplished by listing the exception to standard procedures on the "Shift Report" (exhibit W-1) This report will be signed by the first line supervisor at the end of the shift certifying its accuracy.

B. Door and Jamb Repair and Replacement

1. Door Repair and Replacement

The first line supervisor, with the help of the Door Coordinator, is to determine which doors are to be taken out of service.

Each door taken out of service is either repaired on the unit or replaced with a reconditioned door. The Door Coordinator will be responsible for scheduling and recording of transferred doors. After the door is cleaned, the Mechanical Repairman Teamleader or his designee will determine the extent of the damage. Door

reconditioning at CDR ranges from patching of refractory to a total rebuild of the door.

The Mechanical Teamleader will maintain records of doors reconditioned at CDR which may include the following information:

- 1) Type and extent of damage
- 2) Type and extent of repair
- 2) Date reconditioning was completed
- 4) Name of personnel who have worked on the door

2. Adjustment of new or repaired doors

- 1) All doors are to be checked for adjustment after being delivered to the door rack on the unit.
- 2) After a door is placed on the oven, the plungers are to be adjusted.
- 3) After the door has been placed on the oven and has been charged, readjustments may be required.

3. Jamb Inspection, Repair and Replacement

Jamb repair may involve welding, repositioning of the jamb or replacement of the jamb casting (door frame).

- 1) Jams to be repaired may be identified by:
 - a) routine inspection by operating personnel
 - b) trouble shooting of doors identified by Emission Observers or Door Coordinators
- 2) A jamb suspected of being in need of repair, must first be cleaned and inspected. The results will be communicated to the Area Manager-Operations. The Area Manager-Operations or his designee and Operating Maintenance personnel will determine the next step of action.
- 3) The Area Manager-Operations or his designee will direct the Heating Manager to prepare a schedule of ovens to be removed from service for repair or replacement of the jamb. The Maintenance Manager or team leader will direct the maintenance personnel in the proper repair/replacement of the jamb.
- 4) If the jamb is to be replaced or repaired, operations and /or maintenance will keep records of:
 - a) when the repair order was received
 - b) what repairs were conducted
 - c) when the work was completed

4. Recording and Certification (door/jamb replacement inspection, adjustment, and repair)
 - a) The first line supervisor will record on the "Daily Log Report" all doors that have been replaced with reconditioned door.
 - b) A "Door Maintenance Card" (exhibit W-3) is completed for each door that has been repaired at CDR. These records will be maintained at CDR.

C. Inspection/ Adjustment/ Repair of Automatic Door and Jamb Cleaners

Automatic door cleaners are located on the coke side of all batteries. Automatic jamb cleaner are located on the door machines.

1. Inspection

The Door Machine Operators will be responsible for inspecting the automatic door and jamb cleaner at least once a shift. The operator will visually inspect the first door and jamb cleaned at the beginning of the shift to assure that the cleaner is functioning properly.

2. Adjustments and repair of automatic door and jamb cleaners

Door Machine Operators will be responsible for reporting any problems associated with the automatic cleaning equipment to the first line supervisor. The first line supervisor will then report the problem to the Maintenance Manager or teamleader who will take appropriate corrective action. Either spare machines or manual cleaning of doors and jambs is to be utilized during periods when the automatic cleaning equipment is unavailable because of maintenance or malfunctions.

3. Recording and Certification (Automatic Door and Jamb Cleaner Repair)

The first line supervisor will record problems and maintenance associated with automatic door and jamb cleaning equipment on the "Delay Report" form (exhibit W-4). This form will be signed by the first line supervisor and maintained in the Senior Shift Manager's office.

D. Identifying Leaks and Reporting Chain of Command

1. Recently Charged Ovens

Pusher Machine Operators, Pusher Side Door Cleaners and

Door Machine Operators will inspect and report to the first line supervisor or Door Coordinator door leakage which is considered excessive. (not expected to stop within a normal time period for self sealing doors)

The first line supervisor or Door Coordinator is to maintain a list of doors that have been reported as problem doors in the first line supervisor's office.

2. All Operating Ovens Other than Recently Charged Ovens

The following battery personnel are responsible for identifying door and jamb leaks and reporting them to the first line supervisor or the Door Coordinator:

Door Cleaner
Door Machine Operator
Pusher Machine Operator

The first line supervisor and/or Door Coordinator is to maintain a list of problem doors in the first line supervisor's office.

3. Corrective Action

If door leakage is observed by the Door Cleaner or Machine Operator, he may inspect the leak to determine the cause and take corrective action such as retightening the latches. If the problem door continues to leak, it will then be reported to the first line supervisor or Door Coordinator.

The Door Coordinator will inspect door leaks as observed or reported to determine corrective action.

A door that will require repair is to either repaired on the unit or replaced by a reconditioned door. The Shift Manager's "Shift Report" along with the Emission Observer's report is to be used by the Door Coordinator to determine which doors must be taken out of service for cleaning, inspection, re-adjustment, and/or replacement.

The Door Coordinator will schedule the transfer of problem doors to CDR for repair.

5. Recording and Certification (identifying and corrective action for leaks)

The following reports will be used to document that the work practices for identifying and corrective action for leaks have been performed.

- 1) first line supervisor's "Shift Report" (completed after each shift) will list cleaning and inspection exceptions and replaced doors.
- 2) The "Door Observation" report prepared and signed by

- the Emission Observer will list leaking doors.
- 3) The CDR "Door Maintenance Card" will be used to record the type of maintenance performed on each reconditioned door.

E. Self Sealing Doors and Supplemental Luting

1. Supplemental luting is only to be used as a temporary response on a problem door. Luting material is to be applied with a brush or spray after the door is replaced and the chuck door is closed and it has been determined that the door will leak beyond its normal sealing time.

Luting material is to be applied sparingly and only to the area of the leak.

2. Recording & Certification

If problem doors are luted, the first line supervisor will record those doors as having been luted on the "Shift Report".

F. Procedures for maintaining an inventory of Spare Doors & Jambs

1. Inventory of Doors

The Door Coordinator or first line supervisor is to record the number of doors received from CDR each week. The number of spare doors will be recorded on the "Daily Report" (Six O'clock Report).

2. Inventory of Jambs

An inventory of the spare jambs will be maintained by the Operating Maintenance Manager or his designee. The "Spare Jamb Inventory Report" will be submitted to the Area Manager-Maintenance on a monthly basis.

The weekly Maintenance and Operating Meeting report will list the number of jambs changed and the number to be changed in future outages.

G. Monitoring and Controlling Collector Main Back Pressure

1. Monitoring of Back Pressure

The pressure of the coke oven gas in the collecting main at the battery (back pressure) is to be continuously recorded. Additionally, the operation of the back pressure regulator will be observed once per shift.

2. Inspection and Calibration

- a) The back pressure measurement and control regulator is to be visually inspected daily for defects including malfunctioning charts and oil leaks.
- b) Back pressure instrumentation is to be checked for calibration twice a year.
- c) Collecting mains are to be inspected twice a year or as needed for tar buildup.
- d) Impulse lines are to be inspected and steamed out twice a year.

3. Corrective Action

- a) If the back pressure control regulator (Askania) does not maintain the desired pressure, determine whether the problem is because of inadequate suction from the by-product plant, inappropriate position of the gate valve, or a malfunction of the control regulator.
- b) Position of the gate valve on the suction main is to be adjusted if that is identified as the problem.
- c) If the regulator itself is malfunctioning, it is to be repaired. Pressure should be manually controlled, if appropriate, until the automatic controller is functioning properly.

4. Recording and Certification

- a. A record is to be kept by the Heating department of the individuals assigned to the job positions and assignments responsible for back pressure control. The record is to include date and job position.
- b. A report is to be kept of problems with the back pressure monitoring and control system and any corrective action taken if necessary.
- c. A report is to be maintained which verifies visual inspection of back pressure regulation.

H. Audits of Effectiveness of Inspection and Repair Program

1. Audit of Door/Jamb and Equipment Inspection

- a. The Area Manager-Operations will initiate an audit annually, or more frequently as necessary, of the procedures used by one or more of the personnel listed below responsible for the inspection of doors and door cleaning equipment:

Pusher Machine Operator
Door Machine Operator
Door Cleaner

- b. The audit will be conducted by observing the actions

- of selected operator(s) during the turn.
- c. The auditor will use a check list and/or a written procedure to perform the audit.
- d. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviation from the prescribed inspection procedures, the Area Manager-Operations is to direct the Senior Shift Manager to provide supplemental training to the personnel selected. The supplemental training, if required, may include:
 - 1) review of written job procedures for inspecting doors, jams, and equipment
 - 2) on-the-job training which includes demonstrations of proper procedures
 - 3) other training deemed necessary by the Senior Shift Manager
- d. The Senior Shift Manager is to submit a report when the supplemental training, if required, has been completed.
- e. The following reports are to be kept as part of the audit records:
 - 1) Auditor's Report
 - 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed.

2. Audit of Door and Jamb Repair Program

- a. The Area Manager-Maintenance will initiate an audit annually or more frequently as necessary to confirm that at least one door or jamb that has been repaired meets the specifications for a repaired door or jamb.
- b. The auditor is to use a check list and/or a written procedure to conduct the audit.
- c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports a significant deviation from the prescribed specifications, the Area Manager-Maintenance is to direct the Maintenance Manager to provide supplemental training to the appropriate personnel. The supplemental training, if required, may include:
 - 1) review of written job procedures for door and jamb repair
 - 2) on-the-job training which includes demonstrations of proper procedures
 - 3) other training deemed necessary by the Maintenance Manager
- e. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training,

- if required, has been completed.
- f. The following reports are to be kept as part of the audit records:
- 1) Auditor's Report
 - 2) The Maintenance Manager's Report certifying that the supplemental training, if required, has been completed

III. CHARGING EMISSION CONTROL WORK PRACTICES PLAN

A. Machinery Inspection

1. Larry Car

- a. The following equipment on the larry car will be inspected during the shift:
 - 1) dropsleeve
 - 2) slide gate system
- b. Defects will be reported to the first line supervisor.
- c. Maintenance is to perform a monthly inspection. The Maintenance Manager and/or teamleader is to determine the priority of repairs and to assure that the repairs are made.

2. Pusher Machine

- a. The following equipment on the pusher machine will be inspected during the shift:
 - 1) smoke box
 - 2) level bar indicator light
 - 3) decarbonization air
 - 4) automatic chuck door opener (if applicable)
- b. Defects will be reported to the first line supervisor.
- c. Maintenance is to perform a monthly inspection. The Maintenance Manager and/or teamleader is to determine the schedule for repairs and to assure that the repairs are made.

3. Offtake and Charging System

- a. The following equipment is to be visually inspected during the shift:
 - 1) standpipe and standpipe caps of ovens being charged
 - 2) goosenecks and liquor spray nozzles of ovens being charged
 - 3) steam supply pressure
 - 4) liquor supply pressure
 - 5) charging hole casting and lids of ovens being charged
- b. Defects will be reported to the first line supervisor.
- c. Maintenance is to perform a monthly inspection. The Maintenance Manager and/or teamleader is to

determine the schedule for repairs and to assure that the repairs are made.

B. Frequency of Inspection

1. The operating personnel will inspect larry car, pusher machine, offtake system equipment once per shift as detailed in section III. A.
2. Maintenance personnel will inspect the larry car, pusher, and offtake system equipment once per month.

C. Repair or replacement of equipment

Any defect found during on an inspection that will cause the release of emissions will be repaired to maintain emission control.

If the results of an inspection of equipment used to control charging emissions indicate problems which will cause the release of emissions, the equipment is to be repaired or replaced by a back-up machine. The Maintenance Manager and/or teamleader is to determine a schedule for repairs based on priority.

D. Method Used to Evaluate Conformance with Equipment Operating Specifications

The maintenance inspections as included under section A.1, A.2, and A.3 will be used to maintain equipment in accordance with operating specifications.

E. Audits of Effectiveness of the Inspection and Repair Program

1. Audit of Charging Equipment Inspection Program

- a. The Area Manager-Operations will initiate an audit annually, or more frequently as necessary, of the procedures used by the personnel responsible for the inspection of the following items used to control charging emissions:
 - pusher machine
 - larry car
 - standpipes and standpipe caps
 - goosenecks and liquor sprays
 - charging hole casting and lids
 - steam supply pressure
 - liquor supply pressure
- b. The auditor is to use a check list and/or written procedures to gather information about the inspection process during one charging operation.

- c. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviations from the prescribed procedures, the Area Manager-Operations will direct the Senior Shift Manager to provide supplemental training to selected personnel. The supplemental training, if required, may include:
 - 1) a review of the written job procedures for inspection
 - 2) on-the-job training
 - 3) other training deemed necessary by the Senior Shift Manager
 - d. The Senior Shift Manager is to submit a report to the Area Manager-Operations when the supplemental training, if required, has been completed.
 - e. The following reports are to be kept as part of the auditor's report:
 - 1) Auditor's report
 - 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed.
1. Audit of Charging Equipment Repair Program
- a. The Area Manager-Maintenance will initiate an audit annually or more frequently as necessary to confirm that at least one item listed below was repaired or replaced and meets operating specifications:
 - pusher machine
 - larry car
 - standpipes and standpipe caps
 - goosenecks and liquor spray nozzles
 - charging hole castings and lids
 - steam supply system
 - liquor supply pressure
 - b. The auditor is to target an item that has been repaired to confirm that the repair meets the required operating specifications. The auditor will use a check list and/or written procedures.
 - c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports that the repair does not meet prescribed specifications, the Area Manager-Maintenance will direct Maintenance Manager to provide supplemental training to personnel involved in that type of repair. The supplemental training, if required, may include:
 - 1) a review of the written job procedures for the

- repair of that item
- 2) on-the-job training
- 3) other training deemed necessary by the Maintenance Manager
- d. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- e. The following reports are to be kept as part of the auditor's report:
 - 1) Auditor's report
 - 2) The Maintenance Manager Report certifying that the supplemental training, if required, has been completed.
- F. Procedures for Controlling Emissions from Charging Operations
 - 1. Procedure for filling larry car hoppers
 - 1. Move larry car to loading station.
 - 2. Activate the equipment to deposit coal into the larry car.
 - 3. Visually inspect the hoppers or use hopper full lights and camera monitors to make sure the hoppers are fully loaded.
 - 2. Procedure for the alignment of car over ovens
 - 1. Move larry car over oven to be charged.
 - 2. Align car by visual inspection of the car or by using camera monitors.
 - 3. The Lidman is to verify correct alignment. If the larry car is not properly aligned, the lidman is to notify the larry car operator before charging begins so that proper alignment can be made.
 - 3. Procedure for Filling the Oven with Coal (charging)
 - 1. Pour the coal into the oven by opening the hopper slide gates in the following order; #4 and #1 first, then #3 and #2 last.
 - 2. Contact the pusher machine operator to begin leveling.
 - 4. Leveling operation
 - 1. Upon receiving the appropriate signal from the Larry Car Operator, the Pusher Operator is to open the chuck door and begin the leveling process.

2. When the Larry Car Operator gives the signal that #2 hopper is empty, the Pusher Machine Operator will make one more pass with the leveling bar (clean-out pass).
3. The P.M.O. is to then close the chuck door after removing the leveling bar.
4. The Pusher Machine Operator is to observe the coal being pulled back. If an excessive or insufficient amount of coal is being pulled back, the Pusher Machine Operator is to notify the Shift Manager so that proper adjustments can be made to the larry car's volumetric controls.

G. Procedures and schedules for inspection and cleaning of the offtake system

1. Standpipes: The Larry Car Operator is to inspect the standpipe prior to a charge. If the inside opening is restricted, the operator is to clean the inside opening enough to assure emission control performance.
2. Standpipe Caps: The Larry Car Operator is to inspect the standpipe cap each time the oven is pushed. The operator will clean the standpipe cap manually as necessary to assure emissions control performance.
3. Goosenecks: The Larry Car Operator is to inspect the goosenecks prior to charging. If restricted, the operator will clean the goosenecks manually as necessary to assure emissions control performance.
4. Dampers and mains: The Lidman will check the damper for proper operation prior to each charging operation. The Sprayman will check the tar level in the collector mains monthly or more frequently as necessary assure emissions control performance.
5. Oven Roof: The Pusher Operator is to inspect the oven roofs for damage and excessive roof carbon buildup each time the oven is pushed. The Pusher Machine Operator will monitor roof carbon levels. Ovens with excessive carbon are to be reported to the first line supervisor.
6. Charging Holes: The Lidman is to inspect the charging holes each time a lid is removed prior to the charging operation. The Lidman or Battery Laborer will clean the charging hole castings manually as necessary to assure emissions control performance.
7. Charging Hole Lids: The Lidman is to inspect the charging hole lids each time the lid is removed prior to the charging operation. The Lidman or Battery Laborer will clean the charging hole lids manually as necessary to assure emissions control performance. The Lidman will replace any cracked or damaged lids that cannot be sealed with sealing material.
8. Steam Supply System: The Sprayman is to inspect the

aspiration steam header pressure each day. Due to the location and type of spray nozzle they do not need to be inspected daily.

9. Liquor Sprays. The Sprayman is to inspect the flushing liquor system header pressure each day. The Larry Car Operator is to assure an adequate spray pattern when he cleans the gooseneck prior to charging. The liquor spray nozzles will be cleaned as necessary to assure emissions control performance.

H. Recording and Certification

The inspection and cleaning duties performed by operating personnel are to be performed as part of routine job procedures. Any defect that will influence control of charging emissions is to be reported to the first line supervisor.

The "Shift Report" will list reported exceptions to cleaning and inspection requirements. The "Delays and Machine Repairs" report will list repairs to charging emission control equipment. Maintenance inspection reports will be maintained by the Maintenance Manager and/or teamleader.

IV. TOPSIDE LID EMISSION CONTROL WORK PRACTICES PLAN

A. Inspection, Cleaning, Repair, and Replacement of Charging Hole Lids

The charging hole lids are automatically or manually removed and replaced by the Larry Car Operator or the Lidman. A wet sealing material is applied to seal the lid and charging hole casting interface each time the lids are replaced and periodically as needed.

1. Inspection and Cleaning of Charging Hole Lids

- a) Charging hole lids and castings are to be inspected by the lidman each time after the oven is pushed.
- b) The Battery Laborer or Lidman will be assigned to clean charging hole lids and charging hole castings, as necessary, to assure proper sealing.
- c) Defects are to be brought to the attention of the first line supervisor

2. Repair and Replacement of Charging Hole Lids

- a) The Lidman and/or Battery Laborer is to replace any cracked or damaged lids that cannot be sealed with luting material.
- b) If action is required other than replacing a lid, the first line supervisor is to either direct remedial action, or record the defect on the first line supervisor's "Daily Report" (Six O'clock Report), exhibit W-2, and submit the report to the Senior Shift Manager.
- c) The Senior Shift Manager or his designee is to review the "Daily Report" (Six O'clock Report) daily and to compile a listing of defective charging hole castings. Repair or replacement is to be scheduled and performed.

3. Recording and Certification

- a) The "Shift Report" (exhibit W-1) will be used to record exceptions to the cleaning and inspection practices.
- b) The "Daily Report" will be used to record defects in lids or charging hole castings.
- c) The Senior Shift Manager will maintain a listing of all charging hole casting repairs or replacements.

B. Sealing and Resealing of Charging Hole Lids

1. Sealing Lids After the Charge

- a) The Lidman is to seal all charging lids on each oven after the oven is charged.
- b) The Lidman is to remove the aspiration steam after wet sealing the charging hole lids and reseal the lids if leaking.

2. Resealing of Charging Hole Lids.

- a) The Lidman is to visually inspect newly sealed lids and reseal if leaking.
- b) Any lid emission that cannot be stopped by sealing, or other means, is to be reported to the first line supervisor and logged in the "Daily Report". This report is to be submitted to the Senior Shift Manager for corrective action.

3. Recording and Certification

The "Shift Report" will be used to record defects that prevent the use of sealing material between the lid and charging hole casting.

C. Audits of Effectiveness of Inspection and Repair Program

After the Work Practice Plan for Lid Emissions is implemented, the Area Manager-Operations is to initiate the following audit program:

1. Audit of Inspection Procedures

- a. The Area Manager-Operations is to initiate an audit annually, or more frequently as necessary, of the procedures used by the Lidman for inspecting lids and charging hole castings.
- b. The auditor is to use a check list and audit the Lidman for at least one charging sequence.
- c. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviation from the prescribed inspection procedures, the Area Manager-Operations is to direct the Senior Shift Manager to provide supplemental refresher training to selected personnel. The supplemental training, if required, may include a review of the written job procedures for inspection, on-the-job training, or other training deemed to be required by the Senior Shift Manager.
- d. The Senior Shift Manager is to submit a report to the Area Manager-Operations when the supplemental training, if required, has been completed.
- e. The following reports are to be kept as part of the

audit records:

- 1) Auditor's Report
- 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed

2. Audit of Lid Repair/Replacement Program

- a. The Area Manager-Maintenance is to initiate an audit annually or more frequently as necessary to confirm that at least one of the items below was repaired or replaced and meets operating specifications:
 - 1) Lid
 - 2) Charging Hole Casting
- b. The auditor is to use a checklist and/or written procedure.
- c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports significant deviation from the prescribed repair or replacement procedures, the Area Manager-Maintenance is to direct the Maintenance Manager to provide supplemental training to the selected personnel. The supplemental training, if required, may include a review of the written job procedures for repair, on-the-job training, or other training deemed necessary by the Maintenance Manager.
- d. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- e. Recording and Certification of Lid Repair Audits. The following reports are to be kept as part of the audit records:
 - 1) Auditor's Report
 - 2) The Maintenance Manager's Report certifying that the supplemental training, if required, has been completed.

V. OFFTAKE SYSTEM EMISSION CONTROL WORK PRACTICES PLAN

The offtake system for Clairton Batteries consists of double collecting mains and two offtake assemblies for each oven. The offtake assembly consists of a gooseneck, standpipe cap, and standpipe.

A. Inspection, Repair, and Replacement of Offtake System Components

1. Inspection of Offtake System Components

- a. The Larry Car Operator is to inspect the gooseneck, standpipe cap, and standpipe each time the oven is dampered off the main prior to the charging operation.

2. Repair/Replacement of Offtake System Components

- a. Defects in any offtake system components which are likely to be cause excessive emissions are to be reported to the first line supervisor.
- b. The first line supervisor is to either direct repair, or record the defect on the "Daily Report" (Six O'Clock Report), exhibit W-2, and submit the report to the Senior Shift Manager.
- c. Repair or replacement is to be scheduled and performed.

B. Identifying and Sealing of Leaking Offtake System Components

1. Identifying of leaking offtake system components

The Larry Car Operator and/or the Lidman is to visually inspect the offtake system of each oven charged after the removal of aspirating steam.

2. Sealing of Leaking Offtake System Components

- a. The Larry Car Operator is to seal visible leakage.
- b. Any offtake system emission that cannot be stopped by sealing is to be reported to the first line supervisor and logged on the "Daily Report" (Six O'Clock Report). The report is to submitted to the Senior Shift Manager for corrective action.

C. Dampering off Ovens Prior to a Push

1. Dampering procedure

1. The Lidman is to raise the standpipe cap and damper off ovens in a sequence that proceeds the oven pushing schedule.

D. Recording and Certification

- a. "Shift Report" (exhibit W-1) listing exceptions to the inspection and cleaning procedures outlined above.
- b. "Daily Report" (Six O'Clock Report) listing possible problems with offtake system components
- c. Maintenance Planing Schedule which lists the scheduled offtake repairs.

E. Audits of Effectiveness of Inspection and Repair Program

After the Work Practice Plan for Offtake Emissions is implemented, the following audit program will be used:

1. Audit of Inspection Procedures

- a. The Area Manager-Operations is to initiate an audit annually, or more frequently as necessary, of the procedures used by the Lidman and Larry Car Operator for inspecting the offtake system.
- b. The auditor is to use a check list and audit the Lidman and Larryman for at least one inspection sequence.
- c. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviation from the prescribed inspection procedures, the Area Manager-Operations is to direct the Senior Shift Manager to provide supplemental refresher training to the personnel selected. The supplemental training, if required, may include a review of the written job procedures for inspection, on-the-job training, or other training deemed to be required by Senior Shift Manager.
- d. The Senior Shift Manager is to submit a report to the Area Manager-Operations when the supplemental training if required, has been completed.
- e. Recording and Certification of Lid Inspection Audits. The following reports are to be kept as part of the audit records:

- 1) Auditor's Report
- 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed

2. Audit of Offtake Repair/Replacement Program

- a. The Area Manager-Maintenance is to initiate an audit annually or more frequently as necessary to confirm that least one of the items listed below has been repaired or replaced and meets operating specifications:

- Standpipe
 - Standpipe caps
 - Goosenecks

- b. The auditor is to use a checklist and/or written procedures.
- c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports significant deviation from the prescribed repair or replacement procedures, the Area Manager-Maintenance is to direct the Maintenance Manager to provide supplemental training to selected personnel. The supplemental training, if required, may include a review of the written job procedures for repair, on-the-job training, or other training deemed necessary by the Maintenance Manager.
- d. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- e. Recording and Certification of Offtake Repair Audits. The following reports are to be kept as part of the audit records:
 - 1) Auditor's Report
 - 2) The Maintenance Manager's Report certifying that the supplemental training, if required, has been completed.

VI. GENERAL

A. Deadline Computation

Deadlines are all to be computed from the first Monday after the effective date for plan implementation under 40 C.F.R. 63.306(c). Thus, for example, a requirement to conduct an audit "each month" means that an audit must be conducted within 30 days of the Monday following the effective date for plan implementation of the plan provision containing the audit requirement.

7-9 BATTERY SHIFT REPORT.

SHIFT MANGER _____ TURN _____ DATE _____

DAMPERS _____

PASS UPS _____

KICKOUTS 7 _____ 8 _____ 9 _____

PICK UPS _____

PULLBACKS 7 _____ 8 _____ 9 _____

QUENCH TIMER _____ AUTO

STICKERS _____

QUENCH TOWER SETTING H: exhibit W-1

INVESTIGATE CHARGE _____

DECAR. AIR 5 _____

COKE LINES _____

CARBON CUTTERS 5 _____

DUMP COAL _____

REG. FLUSH. TIME _____

WHARF ENDS 1. _____

AVG. FLUSH. PSI. 7 _____ 8 _____ 9 _____

2. _____

STEAM PSI. 7 _____ 8 _____ 9 _____

DOORS CHANGED _____

FLUE TEMP. PS. 7 _____ 8 _____ 9 _____

CS. 7 _____ 8 _____ 9 _____

MACHINE	IN	OUT	COMMENTS
#5 P.M.			
#6 P.M.			
#7 P.M.			
#6 D.M.			
#7 D.M.			
#8 D.M.			
#4 L.C.			
#5 L.C.			
#6 L.C.			
#16 Q.C.			
#11 Q.C.			
OTHER			

QUENCH CAR _____ OVENS SCHED. _____ OVENS PUSHED _____

OVENS THROUGH PEC _____ OVENS LOSS _____ FIRST PUSH _____

DATE _____ TURN _____ SHIFT MANAGER _____

12X8	8x4	4X12
SCH _____ PUSH _____	SCH _____ PUSH _____	SCH _____ PUSH _____
TOTAL SCHEDULE _____	TOTAL PUSHED _____	
OVENS SPRAYED 12X8 _____	8X4 _____	4X12 _____ TOTAL _____

MACHINE	TIME IN	REMARKS	AIR COND.
11 QC			
16 QC			
5 PM			
6 PM			
7 PM			
6 DM			
7 DM			
8 DM			
4 LC			
5 LC			
6 LC			

exhibit W-2

PREVIOUS DAY

 KICKOUTS
 12x8 8x4 4x12

#7 _____

#8 _____

#9 _____

TOT _____

 PULLBACKS
 12x8 8x4 4x12

#7 _____

#8 _____

#9 _____

TOT _____

OTHER

=====

ACCIDENTS

=====

PLANNED WORK

DOORS CHANGED PREVIOUS DAY

#7 BAT _____ #8 BAT _____ #9 BAT _____

BUNKER STATUS

QUENCH

MANUAL _____

DRAIN _____

PUSH @ 6:00 _____

CHAR. @ 6:00 _____

K.O. @ 6:00 _____

P.B. @ 6:00 _____

ON TIME _____

YES OR NO _____

OVENS DOWN _____

TOT PEOPLE

WORKING 12x8 _____

TOT OT.

HRS. 12x8 _____

STATION	1 HOP	2 HOP	3 HOP	4 HOP	REMARKS
# 1					
# 2					
# 3					
# 4					
# 5					
# 6					
# 7					

1

2

3

4

5

6

7

CLAIRTON WORKS
DOOR MAINTENANCE CARD

TYPE MATERIAL USED

CIRCLE ONE:
(Keypunch Col. 8)

DIAPHRAGMS

1500

5

2

25

✶

၁၃

၁၃

CIRCLE ONE:
(Kevninch Col. 71)

STAINLESS

SEALING RINGS

.....

For Sale

2. Carbon Steel

2

4

40

52

20

CIRCLE ONE:
(Revounch Col. 5)

X

1. Harrison Walker

2 Gen. Ref.

4

5

3

1

5

1. Service Sealing Rings	(Punch 9—12)
2. Replace Sealing Rings	(Punch 13—16)
3. Service Diaphragm	(Punch 17—20)
4. Replace Diaphragm	(Punch 21—24)
5. Replace Retainers	(Punch 25—28)
6. Reline — (Brick)	(Punch 29—32)
7. Service Springs & Plgs.	(Punch 33—36)
8. Replace Springs & Plgs.	(Punch 37—40)
9. Svc. Chuck Door Casting	(Punch 41—44)
10. Repl. Chuck Door Casting	(Punch 45—48)
11. Svc. Chuck Door Face	(Punch 49—52)
12. Repl. Chuck Door Face	(Punch 53—56)
13. Svc. Chuck Dr. "A" Cast	(Punch 57—60)
14. Repl. Chuck Dr. "A" Cast	(Punch 61—64)
15. Service Latches	(Punch 65—68)
16. Replace Latches	(Punch 69—72)
17. Replace Top Hook	(Punch 73—76)
18. Replace Casting	(Punch 77—80)
19. Other (Specify)	

[illegible]

USS Clairton Works

"B" Battery

NESHAPS Work Practices Plan

November 12, 1993

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I. Training

Job Training at Clairton Works encompasses several areas in addition to environmental compliance. Before working on any battery, employees receive initial training which includes lectures, discussions, and video-taped presentations on rules, safety, and procedures. The initial training is then extended to include on-the-job training in routine job duties and in following Safe Job Procedures (SJPs). Additional training that is deemed necessary to achieve environmental compliance may be administered.

Training at Clairton has been developed to provide personnel with practical instruction about the coking process and the relationship between individual job responsibilities and the environment.

Supplemental training will be required if an auditor reports significant deviations from prescribed procedures.

A. Job Title/Emission Points

The following is a list of coke battery job titles for personnel who perform functions directly associated with the control of emissions that may originate from coke oven doors, charging operations, and leakage from oven lids and offtakes. Each job has its own functions which are directly related to specific emission points.

1. Machine Operator
 - a. Pusher Machine
 - i. Pusher Side Doors
 - ii. Charging
 - b. Larry Car
 - i. Charging
 - ii. Offtakes
 - c. Door Machine
 - i. Coke Side Doors
2. Utility Top
 - i. Offtakes
 - ii. Charging
3. Tar Chaser/ Sprayman
 - i. Doors
 - ii. Offtakes
 - iii. Charging
4. Laborer
 - i. Offtakes
 - ii. Charging
 - iii. Lids

- 5. Door Coordinator
 - i. Pusher Side Doors
 - ii. Coke Side Doors

B. Subject Areas for Initial/Refresher Training

The following outline lists the written procedures that are used for initial and refresher training:

Note: There are two types of written procedures:

- 1. Safe Job Procedures (SJP)- written procedures which include all job activities and emphasize the hazards.
 - 2. Standard Operating Procedures (SOP)- written procedures describing how to do the job correctly including procedures that limit emissions.
- 1. Machine Operator
 - a. Pusher Machine
 - i. Pusher Side Doors
 - * SJP PB-5 Removing/Replacing Oven Doors
 - * SJP PB-11 Cleaning Chuck Doors
 - * SOP-PM12 Automatic Door Cleaning
 - * SOP-PM15 Automatic Jamb Cleaning
 - ii. Charging
 - * SJP PB-6 Leveling Ovens
 - b. Larry Car
 - i. Charging
 - * SOP-LC5 Stage Charging
 - * SOP-LC6 Automatic Lid Removal/Replacement
 - ii. Offtakes
 - * SJP CCOB-2 Charging Oven
 - c. Door Machine
 - i. Coke Side Doors
 - * SJP DMB-4 Use of Laser Spot
 - * SJP DMB-5 Removing and Replacing Doors
 - * SJP DMB-6 Cleaning Doors
 - * SJP DMB-10 Jamb Cleaner Utilization
 - 2. Utilityman Top
 - i. Offtakes
 - * SJP UMB-2 Cleaning Offtake Piping
 - ii. Charging
 - * SJP UMB-2 Cleaning Offtake Piping
 - * SJP UMB-6 Dampering Ovens Off
 - * SJP UMB-7 Dampering Ovens On
 - 3. Tar Chaser/ Sprayman
 - i. Doors
 - * SJP SMB-1 Cleaning Flushing Sprays
 - * SJP SMB-3 Chasing Tar
 - ii. Offtakes
 - * SJP SMB-1 Cleaning Flushing Sprays
 - * SJP SMB-2 Cleaning Pitch Traps

- * SJP SMB-3 Chasing Tar
 - iii. Charging
 - * SJP SMB-1 Cleaning Flushing Sprays
 - * SJP SMB-2 Cleaning Pitch Traps
 - * SJP SMB-3 Chasing Tar
- 4. Laborer
 - i. Offtakes
 - * SJP BLB-13 Cleaning Flushing Sprays
 - * SJP BLB-14 Cleaning Pitch Traps
 - ii. Charging
 - * SJP LB-4 Dampering Ovens On
 - * SJP LB-5 Damper Ovens Off
 - iii. Lids
 - * SJP BLB-54 Removing Lids, Cleaning Lids and Replacing Lids
- 5. Door Coordinator
 - i. Doors
 - * SOP-DC3 Door Trouble Shooting

C. Training Methods/Duration

The initial training includes safety information and on-the-job training. Refresher training includes a review of Safe Job Procedures or other training deemed to be necessary.

It is difficult to allocate the time spent in training to environmental compliance because training in control of emissions is an integral part of total job training.

1. Initial Training

Indoctrination Period

When first assigned to the Coking Department, personnel receive at least 24 hours of initial classroom type training. During this training, the employee will receive basic information such as:

- a. the importance of OSHA required apparel
- b. "General Safety & Plant Conduct Rule Book"
- c. "Lockout/Tryout" Rules
- d. description/explanation of safety program
- e. gas rescue training
- f. Safety videos
- g. Material Safety Data Sheets (MSDS)
- h. Safe Job Procedures (SJP)
- i. Standard Operating Procedures (SOP)

Break-in Period

The initial training is then extended to include on-the-job training in the routine job duties and in following Safe Job Procedures and Standard Operating Procedures (SOP). The employee is assigned an initial work area and job (usually Door Cleaner and/or Lidman). To become qualified at a particular job, the person works along side an experienced worker and then by himself to demonstrate his ability to properly perform the job. During the qualification period, the first line supervisor observes the worker to assure that he is following procedures that promote safety and environmental compliance.

When the employee has completed the qualification period, he is then assigned to a crew on one of the battery units.

Typically, an employee with several years of experience is assigned to work on B Battery. Since a B Battery Laborer is required to operate every machine on B Battery, he will work along side an experienced operator to be trained in operating the machines.

Duration:

(the estimated time spent on training in environmental compliance is enclosed in parenthesis)

a) initial indoctrination:

The duration of the initial indoctrination period is between 24 and 40 hours. (4 to 10 hrs)

b) Break in Period "on-the-job training":

The duration of the Break-in period is different for the different positions. Listed below are recommended minimum training periods for the various job assignments on B Battery.

Position	Minimum Training Hrs.	Estimate of Environmental Compliance Training Hrs.
Machine Operator	24	(10-15)
Utilityman/Top	8	(3-4)
Battery Laborer	8	(3-4)
Sprayman	16	(5-6)
Door Coordinator	24	(15-20)

2. Refresher Training-

To maintain awareness of job requirements, each employee is re-instructed in aspects of his job. Each week the first line supervisor meets individually with his crew members to review selected Safe Job Procedures. This instruction is then re-enforced by observing the employee as he performs his job.

Additional training may be required if the employee is not performing satisfactorily.

Safe Job Procedures (SJPs) are reviewed with all battery personnel. The first line supervisor reviews at least one procedure a week with each of his employees. These procedures, while highlighting job hazards, also assure that employees understand the best procedures for environmental compliance.

Duration:

Estimate of
Training

Estimate of
Environmental
Compliance
Training Hrs.

Refresher Training	6-8 hrs/year	(2-4 hrs/year)
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D. Demonstration of Successful Completion of Training

A record of both initial and refresher training that has been given to each employee is maintained by the first line supervisor. These records are dated and initialed by the first line supervisor.

E. Procedure to Document Performance of Plan Requirements

To document performance of plan requirements pertaining to the daily operation of the battery and its emission control equipment, the first line supervisor will record reported exceptions to plan requirements on the "Shift Report" (exhibit W-1). The first line supervisor will sign this report.

I. DOOR EMISSION CONTROL WORK PRACTICES PLAN

Doors on B battery at USS Clairton are considered self-sealing. Both the Pusher Machine Operator on the Pusher Side and the Door Machine Operator on the coke side use automatic door and jamb cleaners.

A. Inspection and Cleaning of Doors and Jambs

1. Inspection of Oven Doors and Jambs

Oven doors and jambs are to be inspected for defects which may cause problems with the door sealing system.

- a. The oven door and door jamb is to be visually inspected by the Pusher Machine Operator on the pusher side and the Door Machine Operator on the coke side after the oven is pushed.
- b. The oven wall and lintel is to be inspected by the Door Machine Operator and Pusher Machine Operator after each push.
- c. Visible defects are to be brought to the attention of the first line supervisor by the Door Machine Operator or the Pusher Machine Operator.
- d. The Pusher Machine Operator is to inspect chuck doors and jambs for defects before the oven is charged. Defects are to be reported to the first line supervisor.
- e. The first line supervisor is to either direct immediate remedial action or record the problem for later action on the "Daily Report" ("Six O'Clock Report") exhibit W-2, which is then distributed to appropriate operating and maintenance management.

2. Cleaning of Oven Doors and Jambs

The door and jamb will be cleaned after each coking cycle.

If the cleaners on either the pusher machine or the door machine become inoperable for any reason, a spare machine can be put in service.

a. Pusher Side Door Cleaning Procedure

The Pusher Machine Operator spots the pusher at the correct oven with the aid of the laser spotting device and removes the oven door. Once the extractor has been returned to its home position, the Operator initiates the door cleaning sequence from the operators console. The door is moved into position and cleaned by hydraulically operated metal scrappers.

The jamb cleaning sequence is initiated upon completion of the pushing operation. The automatic cleaner consists of metal scrappers which remove tar and carbon from the inside jamb and jamb face. The sequence for door

replacement is not performed until all required cleaning is executed from the pusher operator's console.

b. Coke Side Door Cleaning Procedure

In conjunction with the pushing operation, the door cleaning sequence is initiated from the door machine operator's console. The door cleaning components are essentially the same as on the pusher machine, ie. hydraulically controlled mechanisms which use scrappers to remove carbon deposits.

After the oven is pushed and the coke guide is removed, the automatic jamb cleaner sequence is initiated. After all required cleaning is performed, the door is then replaced.

3. Conformance with specifications

- a. The routine inspection of the door sealing system will be conducted by the Pusher Machine Operator and/or the Door Machine Operator. This inspection may include the visual inspection of cleanliness, excessive wear, and physical damage.
- b. A problem door or jamb which has been identified by either poor performance or a report of a visible defect is to be inspected more thoroughly by the first line supervisor or Door Coordinator. This inspection may include taking physical measurements to determine the remedial action required.

4. Recording and Certification (Cleaning and Inspection)

Certification of inspection and cleaning practices for doors and jambs will be accomplished by listing the exception to standard procedures on the "Shift Report" (exhibit W-1) This report will be signed by the first line supervisor at the end of the shift certifying its accuracy.

B. Door and Jamb Repair and Replacement

1. Door Repair and Replacement

The first line supervisor, with the help of the Door Coordinator, is to determine which doors are to be taken out of service.

Each door taken out of service is either repaired on the unit or replaced with a reconditioned door. The Door Coordinator will be responsible for scheduling and recording of transferred doors. After the door is cleaned, the Mechanical Repairman Teamleader or his designee will determine the extent of the damage. Door

reconditioning at CDR ranges from patching of refractory to a total rebuild of the door.

The Mechanical Teamleader will maintain records of doors reconditioned at CDR which may include the following information:

- 1) Type and extent of damage
- 2) Type and extent of repair
- 2) Date reconditioning was completed
- 4) Name of personnel who have worked on the door

2. Adjustment of new or repaired doors

- 1) All doors are to be checked for adjustment after being delivered to the door rack on the unit.
- 2) After a door is placed on the oven, the plungers are to be adjusted.
- 3) After the door has been placed on the oven and has been charged, final adjustments are to be made.

3. Jamb Inspection, Repair and Replacement

- 1) Jams to be repaired may be identified by:
 - a) routine inspection
 - b) trouble shooting of doors identified by Emission Observers or Door Coordinators
- 2) A jamb suspected of being in need of repair, must first be cleaned and inspected. The results will be communicated to the Area Manager-Operations. The Area Manager-Operations or his designee and Operating Maintenance personnel will determine the next step of action.
- 3) The Area Manager-Operations or his designee will direct the Heating Manager to prepare a schedule of ovens to be removed from service for repair or replacement of the jamb. The Maintenance Manager or team leader will direct the maintenance personnel in the proper repair/replacement of the jamb.
- 4) If the jamb is to be replaced or repaired, operations and/or maintenance will keep records of:
 - a) when the repair order was received
 - b) what repairs were conducted
 - c) when the work was completed

4. Recording and Certification (door/jamb replacement inspection, adjustment, and repair)
 - a) The first line supervisor will record on the "Shift Report" all doors that have been replaced with a reconditioned door.
 - b) A "Door Maintenance Card" (exhibit W-3) is completed for each door that has been repaired at CDR. These records will be maintained at CDR.

C. Inspection/ Adjustment/ Repair of Automatic Door and Jamb Cleaners

Automatic door cleaners and jamb cleaners are on both the pusher machines and on the door machines.

1. The Machine Operators will be responsible for inspecting the automatic door and jamb cleaner at least once a shift. The operator will visually inspect the first door and jamb cleaned at the beginning of the shift to assure that the cleaner is functioning properly.
2. Adjustments and repair of automatic door and jamb cleaners.

Machine Operators will be responsible for reporting any problems associated with the automatic cleaning equipment to the first line supervisor. The first line manager will then report the problem to the Maintenance Manager or teamleader who will take appropriate corrective action. Either spare machines or manual cleaning of doors and jambs is to be utilized during periods when the automatic cleaning equipment is unavailable because of maintenance or malfunctions.
3. Recording and Certification (Automatic Door and Jamb Cleaner Repair)

The first line supervisor will record problems and maintenance associated with automatic door and jamb cleaning equipment on the "Delay Report" form (exhibit W-4). This form will be signed by the first line supervisor and maintained in the Senior Shift Manager's office.

D. Identifying Leaks and Reporting Chain of Command

1. Recently Charged Ovens

Pusher Machine Operators and Door Machine Operators will inspect and report to the first line supervisor or Door Coordinator door leakage which is considered excessive. (not expected to stop within a normal time period for self sealing doors)

The first line supervisor or Door Coordinator is to maintain a list of doors that have been reported as problem doors in the first line supervisor's office.

2. All Operating Ovens Other than Recently Charged Ovens

The following battery personnel are responsible for identifying door and jamb leaks and reporting them to the first line supervisor or the Door Coordinator:

Door Machine Operator
Pusher Machine Operator

The first line supervisor and/or Door Coordinator is to maintain a list of problem doors in the first line supervisor's office.

3. Corrective Action

If door leakage is observed by the Machine Operator, he may inspect the leak to determine the cause and take corrective action such as retightening the latches. If the problem door continues to leak, it will then be reported to the first line supervisor or Door Coordinator.

The Door Coordinator will inspect door leaks as observed or reported to determine corrective action.

A door that will require repair is to either repaired on the unit or replaced by a reconditioned door. The Shift Manager's "Shift Report" along with the Emission Observer's report is to be used by the Door Coordinator to determine which doors must be taken out of service for cleaning, inspection, re-adjustment, and/or replacement.

The Door Coordinator will schedule the transfer of problem doors to CDR for repair.

5. Recording and Certification (identifying and corrective action for leaks)

The following reports will be used to document that the work practices for identifying and corrective action for leaks have been performed.

- 1) first line supervisor's "Shift Report" (completed after each shift) will list cleaning and inspection exceptions and replaced doors.
- 2) The "Door Observation" report prepared and signed by the Emission Observer will list leaking doors.
- 3) The CDR "Door Maintenance Card" will be used to record the type of maintenance performed on each reconditioned door.

E. Self Sealing Doors and Supplemental Luting

1. Supplemental luting is only to be used as a temporary response on a problem door. Luting material is to be applied with a brush or spray after the door is replaced and the chuck door is closed and it has been determined that the door will leak beyond its normal sealing time.

Luting material is to be applied sparingly and only to the area of the leak.

2. Recording & Certification

If problem doors are luted, the first line supervisor will record those doors as having been luted on the "Shift Report".

F. Procedures for maintaining an inventory of Spare Doors & Jambs

1. Inventory of Doors

The Door Coordinator or first line supervisor is to record the number of doors received from CDR each week. The number of spare doors will be recorded on the "Daily Log" (Six O'clock Report).

2. Inventory of Jambs

If the replacement of jambs becomes necessary, an inventory of the spare jambs will be maintained by the Operating Maintenance Manager or his designee. The "Spare Jamb Inventory Report" will be submitted to the Area Manager-Maintenance on a monthly basis.

G. Monitoring and Controlling Collector Main Back Pressure

1. Monitoring of Back Pressure

The pressure of the coke oven gas in the collecting main at the battery (back pressure) is to be continuously recorded. Additionally, the operation of the back pressure regulator will be observed once per shift.

2. Inspection and Calibration

- a) The back pressure measurement and control regulator is to be visually inspected daily for defects including malfunctioning charts and oil leaks.
- b) Back pressure instrumentation is to be checked for calibration twice a year.
- c) Collecting mains are to be inspected twice a year or as needed for tar buildup.
- d) Impulse lines are to be inspected and steamed out twice

a year.

3. Corrective Action

- a) If the back pressure control regulator (Askania) does not maintain the desired pressure, determine whether the problem is because of inadequate suction from the by-product plant, inappropriate position of the gate valve, or a malfunction of the control regulator.
- b) Position of the gate valve on the suction main is to be adjusted if that is identified as the problem.
- c) If the regulator itself is malfunctioning, it is to be repaired. Pressure should be manually controlled, if appropriate, until the automatic controller is functioning properly.

4. Recording and Certification

- a. A record is to be kept by the Heating department of the individuals assigned to the job positions and assignments responsible for back pressure control. The record is to include date and job position.
- b. A report is to be kept of problems with the back pressure monitoring and control system and any corrective action taken if necessary.
- c. A report is to be maintained which verifies visual inspection of back pressure regulation.

H. Audits of Effectiveness of Inspection and Repair Program

1. Audit of Door/Jamb and Equipment Inspection

- a. The Area Manager-Operations will initiate an audit annually, or more frequently as necessary, of the procedures used by one or more of the personnel listed below responsible for the inspection of doors and door cleaning equipment:

Pusher Machine Operator
Door Machine Operator

- b. The audit will be conducted by observing the actions of selected operator(s) during the turn.
- c. The auditor will use a check list and/or a written procedure to perform the audit.
- d. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviation from the prescribed inspection procedures, the Area Manager-Operations is to direct the Senior Shift Manager to provide supplemental training to the personnel selected. The supplemental training, if required, may include:

- 1) review of written job procedures for inspecting doors, jambs, and equipment
 - 2) on-the-job training which includes demonstrations of proper procedures
 - 3) other training deemed necessary by the Senior Shift Manager
- d. The Senior Shift Manager is to submit a report when the supplemental training, if required, has been completed.
- e. The following reports are to be kept as part of the audit records:
- 1) Auditor's Report
 - 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed.

2. Audit of Door and Jamb Repair Program

- a. The Area Manager-Maintenance will initiate an audit annually, or more frequently as necessary, to confirm that at least one door or jamb that has been repaired meets the specifications for a repaired door or jamb.
- b. The auditor is to use a check list and/or a written procedure to conduct the audit.
- c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports significant deviation from the prescribed specifications, the Area Manager-Maintenance is to direct the Maintenance Manager to provide supplemental training to the appropriate personnel. The supplemental training, if required, may include:
- 1) review of written job procedures for door and jamb repair
 - 2) on-the-job training which includes demonstrations of proper procedures
 - 3) other training deemed necessary by the Maintenance Manager
- e. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- f. The following reports are to be kept as part of the audit records:
- 1) Auditor's Report
 - 2) The Maintenance Manager's Report certifying that the supplemental training, if required, has been completed

III. CHARGING EMISSION CONTROL WORK PRACTICES PLAN

A. Machinery Inspection

1. Larry Car

- a. The following equipment on the larry car will be inspected during the shift:
 - 1) dropsleeve
 - 2) slide gate system
- b. Defects are to be reported to the first line supervisor.
- c. Maintenance is to perform a monthly inspection. The Maintenance Manager and/or teamleader is to determine the priority of repairs and to assure that the repairs are made.

2. Pusher Machine

- a. The following equipment on the pusher machine will be inspected during the shift:
 - 1) smoke box
 - 2) decarbonization air
 - 3) automatic chuck door opener
- b. Defects are to be reported to the first line supervisor.
- c. Maintenance is to perform a monthly inspection. The Maintenance Manager and/or teamleader is to determine the schedule for repairs and to assure that the repairs are made.

3. Offtake and Charging System

- a. The following equipment is to be visually inspected during the shift:
 - 1) standpipes of ovens being charged
 - 2) steam supply pressure
 - 3) liquor pressure
 - 4) charging holes and lids of ovens being charged
- b. Defects are to be reported to the first line supervisor.
- c. Maintenance is to perform a monthly inspection.

The Maintenance Manager and/or teamleader is to determine the schedule for repairs and to assure that the repairs are made.

B. Frequency of Inspection

1. The operating personnel will inspect larry car, pusher machine, offtake system equipment once per shift as detailed in section III. A.
2. Maintenance personnel will inspect the larry car, pusher, and offtake system equipment once per month.

C. Repair or replacement of equipment

Any defect found during on an inspection that will cause the release of emissions will be repaired to maintain emission control.

If the results of an inspection of equipment used to control charging emissions indicate problems which will cause the release of emissions, the equipment is to be repaired or replaced by a back-up machine. The Maintenance Manager and/or teamleader is to determine a schedule for repairs based on priority.

D. Method Used to Evaluate Conformance with Equipment Operating Specifications

The maintenance inspections as included under section A.1, A.2, and A.3 will be used to maintain equipment in accordance with operating specifications.

E. Audits of Effectiveness of the Inspection and Repair Program

1. Audit of Charging Equipment Inspection Program

- a. The Area Manager-Operations will initiate an audit annually or more frequently as necessary the procedures used by the personnel responsible for the inspection of the following items used to control charging emissions:

- pusher machine
- larry car
- standpipes
- charging holes and lids
- steam system
- liquor sprays

- b. The auditor is to use a check list and/or written procedures to gather information about the inspection process during one charging operation.

- c. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviations from the prescribed procedures, the Area Manager-Operations will direct the Senior Shift Manager to provide supplemental training to selected personnel. The supplemental training, if required, may include:
 - 1) a review of the written job procedures for inspection
 - 2) on-the-job training
 - 3) other training deemed necessary by the Senior Shift Manager
 - d. The Senior Shift Manager is to submit a report to the Area Manager-Operations when the supplemental training has been completed.
 - e. The following reports are to be kept as part of the auditor's report:
 - 1) Auditor's report
 - 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed.
1. Audit of Charging Equipment Repair Program
- a. The Area Manager-Maintenance will initiate an audit annually or more frequently as necessary to confirm that at least one item listed below was repaired or replaced and meets operating specifications:
 - pusher machine
 - larry car
 - standpipes and standpipe caps
 - goosenecks
 - charging hole castings and lids
 - steam supply system
 - liquor sprays
 - b. The auditor is to target an item that has been repaired to confirm that the repair meets the required operating specifications. The auditor will use a check list and/or written procedures.
 - c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports that the repair does not meet prescribed specifications, the Area Manager-Maintenance will direct Maintenance Manager to provide supplemental training to personnel involved in that type of repair. The supplemental training, if required, may include:
 - 1) a review of the written job procedures for the

- repair of that item
 - 2) on-the-job training
 - 3) other training deemed necessary by the Maintenance Manager
- d. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- e. The following reports are to be kept as part of the auditor's report:
 - 1) Auditor's report
 - 2) The Maintenance Manager Report certifying that the supplemental training, if required, has been completed.
- F. Procedures for Controlling Emissions from Charging Operations
 - 1. Procedure for filling larry car hoppers
 - 1. Move larry car to loading station.
 - 2. Activate the equipment to deposit coal into the larry car.
 - 3. Use hopper full lights and/or camera monitors to make sure the hoppers are fully loaded.
 - 2. Procedure for the alignment of car over ovens
 - 1. Move larry car over oven to be charged.
 - 2. Align car over the oven by using camera monitors.
 - 3. Procedure for Filling the Oven with Coal (charging)
 - 1. Pour the coal into the oven by opening the hopper slide gates in the following order; #4 and #1 first, then #3 and #2 last.
 - 2. Contact the pusher machine operator to begin leveling.
 - 3. After #2 hopper is empty, the L.C.O. will tell the P.M.O. to make one more pass and then replace number #2 lid.
 - 4. Leveling operation
 - 1. Upon receiving the appropriate signal from the Larry Car Operator, the Pusher Operator is to open the chuck door and begin the leveling process.
 - 2. When the Larry Car Operator gives the signal that #2 hopper is empty, the Pusher Machine Operator will make one more pass with the leveling bar (clean-out pass).
 - 3. The P.M.O. is to then close the chuck door

after removing the leveling bar.

G. Procedures and schedules for inspection and cleaning of the offtake system

1. Standpipes: With the improved placement of the flushing liquor nozzle inside the gooseneck, the need to clean standpipes after every coking cycle has been eliminated. By observing the decarbonization air inside the oven, the Pusher Machine Operator will determine if the standpipe is opened enough for charging.
2. Standpipe Caps: The standpipe caps on B-Battery are of the water seal design. The Utilityman or Laborer inspects the cap to insure that there is sufficient water in the trough and is free from dirt. The caps are inspected daily.
3. Goosenecks: With the improved placement of the flushing liquor nozzle inside the gooseneck, the need to clean goosenecks after every coking cycle has been eliminated. Typically, however, goosenecks are cleaned at a minimum of 10 days, manually by the Battery Laborer and/or Utilityman/Top.
4. Dampers and Mains: The Sprayman will check the tar level inside the collector main every month or more frequently as necessary to assure emissions control performance. The Utilityman/Top will report to the first line manager any dampers that do not operate properly.
5. Oven Roof: Natural draft decarbonization through open charging holes, compressed air decarbonizing jets, and manual removal of carbon deposits, are methods of carbon removal. The Pusher Machine Operator is to inspect the oven roofs for damage and excessive roof carbon buildup each time the oven is pushed. The Pusher Machine Operator will monitor roof carbon levels as necessary to assure emissions control performance. If excessive roof carbon buildup or oven damage is found, the Pusher Machine Operator will contact the first line supervisor.
6. Charging Holes: The Larry Car Operator is to inspect the charging holes before the charge. The Utilityman or Battery Laborer will clean the charging hole castings manually as necessary to assure emissions control performance.
7. Charging Hole Lids: The Utilityman Top is to inspect the charging hole lids after the oven has been pushed and the doors have been replaced. The Utilityman Top or Laborer will clean the charging hole lids manually as necessary to assure emissions control performance.
8. Steam Supply System: The Sprayman is to inspect the steam system each day.
9. Liquor Sprays. The Sprayman is to inspect

the flushing liquor system (including the liquor spray pattern and the header pressure) each day. The Tar Chaser/Sprayman will clean the liquor spray nozzles as necessary to assure emissions control performance.

H. Recording and Certification

The inspection and cleaning duties performed by operating personnel are to be performed as part of routine job procedures. Any defect that will influence control of charging emissions is to be reported to the first line supervisor.

The "Shift Report" will list reported exceptions to cleaning and inspection requirements. The "Delays and Machine Repairs" report will list repairs to charging emission control equipment. Maintenance inspection reports will be maintained by the Maintenance Manager and/or teamleader.

IV. TOPSIDE LID EMISSION CONTROL WORK PRACTICES PLAN

A. Inspection, Cleaning, Repair, and Replacement of Charging Hole Lids

The charging hole lids are automatically removed and replaced by a magnetic lid lifting system which is operated by the Larry Car Operator. A wet sealing material is applied to seal the lid and charging hole casting interface each time the lids are replaced and periodically as needed.

1. Inspection and Cleaning of Charging Hole Lids

- a) Charging hole lids and castings are to be inspected by the Utilityman/Top or the Larry Car Operator before the oven is charged.
- b) The Battery Laborer or Utilityman/Top will be assigned to clean charging hole lids and charging hole castings, as necessary, to assure proper sealing.
- c) Defects are to be brought to the attention of the first line supervisor

2. Repair and Replacement of Charging Hole Lids

- a) The Larry Car Operator and/or Battery Laborer is to replace any cracked or damaged lids that cannot be sealed with luting material.
- b) If action is required other than replacing a lid, the first line supervisor is to either direct remedial action, or record the defect on the first line supervisor's "Daily Report" (Six O'Clock Report), exhibit W-2, and submit the report to the Senior Shift Manager.
- c) The Senior Shift Manager or his designee is to review the "Daily Report" (Six O'Clock Report) daily and to compile a listing of defective charging hole castings. Repair or replacement is to be scheduled and performed.

3. Recording and Certification

- a) The "Shift Report" (exhibit W-1) will be used to record exceptions to the cleaning and inspection practices.
- b) The "Daily Report" (Six O'Clock Report) will be used to record defects in lids or charging hole castings.
- c) The Senior Shift Manager will maintain a listing of all charging hole casting repairs or replacements.

B. Sealing and Resealing of Charging Hole Lids

1. Sealing Lids After the Charge

- a) The Utilityman/Top is to seal all charging lids on each oven after the oven is charged.
- b) The Utilityman/Top is to remove the aspiration steam after wet sealing the charging hole lids and reseal the lids if leaking.

2. Resealing of Charging Hole Lids.

- a) The Utilityman/Top is to visually inspect newly sealed lids and reseal if leaking.
- b) Any lid emission that cannot be stopped by sealing, or other means, is to be reported to the first line supervisor and logged in the "Daily Report". This report is to be submitted to the Senior Shift Manager for corrective action.

3. Recording and Certification

The "Shift Report" will be used to record defects that prevent the use of sealing material between the lid and charging hole casting.

C. Audits of Effectiveness of Inspection and Repair Program

After the Work Practice Plan for Lid Emissions is implemented, the Area Manager-Operations is to initiate the following audit program:

1. Audit of Inspection Procedures

- a. The Area Manager-Operations is to initiate an audit annually, or more frequently as necessary, of the procedures used by the Utilityman/Top or Larry Car Operator for inspecting lids and charging hole castings.
- b. The auditor is to use a check list and/or written procedures and audit the Utilityman/Top or Larry Car Operator for at least one charging sequence.
- c. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviation from the prescribed inspection procedures, the Area Manager-Operations is to direct the Senior Shift Manager to provide supplemental refresher training to selected personnel. The supplemental training, if required, may include a review of the written job procedures for inspection, on-the-job training, or other training deemed to be required by the Senior Shift Manager.

- d. The Senior Shift Manager is to submit a report to the Area Manager-Operations when the supplemental training has been completed.
- e. The following reports are to be kept as part of the audit records:

- 1) Auditor's Report
- 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed

2. Audit of Lid Repair/Replacement Program

- a. The Area Manager-Maintenance is to initiate an audit annually or more frequently as necessary to confirm that at least one of the items below was repaired or replaced and meets operating specifications:

- 1) Lid
- 2) Charging Hole Casting

- b. The auditor is to use a checklist and/or written procedure.
- c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports significant deviation from the prescribed repair or replacement procedures, the Area Manager-Maintenance is to direct the Maintenance Manager to provide supplemental training to the selected personnel. The supplemental training, if required, may include a review of the written job procedures for repair, on-the-job training, or other training deemed necessary by the Maintenance Manager.
- d. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- e. Recording and Certification of Lid Repair Audits. The following reports are to be kept as part of the audit records:

- 1) Auditor's Report
- 2) The Maintenance Manager's Report certifying that the supplemental training, if required, has been completed.

V. OFFTAKE SYSTEM EMISSION CONTROL WORK PRACTICES PLAN

The offtake system for B Battery consists of double collecting mains and two offtake assemblies for each oven. The offtake assembly consists of a gooseneck, standpipe cap, and standpipe.

A. Inspection, Repair, and Replacement of Offtake System Components

1. Inspection of Offtake System Components

- a. The Larry Car Operator and/or Utilityman/Top is to inspect the gooseneck, standpipe cap, and standpipe prior to the charging operation.

2. Repair/Replacement of Offtake System Components

- a. Defects in any offtake system components which are likely to be cause excessive emissions are to be reported to the first line supervisor.
- b. The first line supervisor is to either direct repair, or record the defect on the "Daily Report" (Six O'Clock Report), exhibit W-2, and submit the report to the Senior Shift Manager.
- c. Repair or replacement is to be scheduled and performed.

B. Identifying and Sealing of Leaking Offtake System Components

1. Identifying of leaking offtake system components

The Larry Car Operator and/or the Utilityman/Top is to visually inspect the offtake system of each oven charged after the removal of aspirating steam.

2. Sealing of Leaking Offtake System Components

- a. The Larry Car Operator and/or Utilityman/Top is to seal visible leakage.
- b. Any offtake system emission that cannot be stopped by sealing is to be reported to the first line supervisor and logged on the "Daily Report" (Six O'Clock Report). The report is to be submitted to the Senior Shift Manager for corrective action.

C. Dampering off Ovens Prior to a Push

1. Dampering procedure

The dampering procedure can be performed by either of two methods:

- a. Remote mechanical operation from inside the operators cab.
- b. Manually operated by the Utilityman/Top or Laborer from the battery top.

Using either method a or b, from above, ovens are dampered off in a sequence that proceeds the oven pushing schedule.

D. Recording and Certification

- a. "Shift Report" listing exceptions to the inspection and cleaning procedures outlined above.
- b. First line supervisor's "Daily Report" (Six O'Clock Report)
- c. Maintenance Planing Schedule which lists the scheduled offtake repairs.

E. Audits of Effectiveness of Inspection and Repair Program

After the Work Practice Plan for Offtake Emissions is implemented, the following audit program will be used:

1. Audit of Inspection Procedures

- a. The Area Manager-Operations is to initiate an audit annually, or more frequently as necessary, of the procedures used by the Larry Car Operator and/or Utilityman/Top for inspecting the offtake system.
- b. The auditor is to use a check list and audit the Larry Car Operator and/or Utilityman/Top for at least one inspection sequence.
- c. The auditor is to report his findings to the Area Manager-Operations. If the auditor reports significant deviation from the prescribed inspection procedures, the Area Manager-Operations is to direct the Senior Shift Manager to provide supplemental refresher training to the personnel selected. The supplemental training, if required, may include a review of the written job procedures for inspection, on-the-job training, or other training deemed to be required by Senior Shift Manager.
- d. The Senior Shift Manager is to submit a report to the Area Manager-Operations when the supplemental training if required, has been completed.
- e. Recording and Certification of Lid Inspection Audits. The following reports are to be kept as part of the audit records:

- 1) Auditor's Report
- 2) The Senior Shift Manager's Report certifying that the supplemental training, if required, has been completed

2. Audit of Offtake Repair/Replacement Program

- a. The Area Manager-Maintenance is to initiate an audit annually or more frequently as necessary to confirm that least one of the items listed below has been repaired or replaced and meets operating specifications:

Standpipe
Standpipe caps
Goosenecks

- b. The auditor is to use a checklist and/or written procedures.
- c. The auditor is to report his findings to the Area Manager-Maintenance. If the auditor reports significant deviation from the prescribed repair or replacement procedures, the Area Manager-Maintenance is to direct the Maintenance Manager to provide supplemental training to selected personnel. The supplemental training, if required, may include a review of the written job procedures for repair, on-the-job training, or other training deemed necessary by the Maintenance Manager.
- d. The Maintenance Manager is to submit a report to the Area Manager-Maintenance when the supplemental training, if required, has been completed.
- e. Recording and Certification of Offtake Repair Audits. The following reports are to be kept as part of the audit records:
 - 1) Auditor's Report
 - 2) The Maintenance Manager's Report certifying that the supplemental training, if required, has been completed.

VI. GENERAL

A. Deadline Computation

Deadlines are all to be computed from the first Monday after the effective date for plan implementation under 40 C.F.R. 63.306(c). Thus, for example, a requirement to conduct an audit "each month" means that an audit must be conducted within 30 days of the Monday following the effective date for plan implementation of the plan provision containing the audit requirement.

BATTERY FOREMAN'S REPORT

TURN

DATE

WIPER

QUENCH SETTING

TIMER

AUTO

DRAIN

CKOUTS

PULLBACKS

INVESTIGATE CHARGES

OVEN INTERIOR INSP.

WIP COAL

COAL LINES

exhibit W-1

CARB. AIR

1

2

FLUE TEMPS. FS

HOUSE TIME

1

2

CS

ISHING TIME

1

2

DOORS CHANGED

ISHING PRESS. 1

1

2

TEAM PRESSURE

1

2

SS UPS

NUMBER

SERIES

TIME

CK UPS

CHINE STATUS

IN

OUT

COMMENTS

SHER B-1

B-2

JR M B-1

B-2

RRY B-1

B-2

ENCH CAR

AUTO

SEMI AUTO

MANUAL

LOSS

FIRST PUSH

FIRST DUMP

"B" BATTERY DAILY REPORT

DATE:		TURN:12X8 SHIFT MANAGER:																					
12x8 SCHEDULE TOTAL SCHEDULE		8X4 SCHEDULE TOTAL PUSHED		4X12 SCHEDULE PUSH																			
MACHINE:TIME IN		REMARKS			A/C																		
B-1 QC																							
B-2 QC																							
B-1 PM																							
B-2 PM																							
B-1 DM																							
B-2 DM																							
B-1 LC																							
B-2 LC																							
BAGHSE					DELTAP AVG _____ DELTAP RNG _____																		
OTHER																							
K.O. _____ P.B. _____ QUENCH MANUAL AUTO _____ FLUE TEMP. _____ PS _____ CS _____ AVE _____ PUSH@6:00 _____ CHG@6:00 _____ ON TIME YES OR NO _____ OVENS DOWN _____		<div>COAL INFORMATION</div> <div>B.D. GRIND MOIST ADJ.L.V. OVEN TIME</div> <table border="1"> <tr> <td>#2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>#4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div>ACCIDENTS:</div> <div>PLANNED WORK:</div> <div>DOORS CHANGED PREVIOUS DAY</div>				#2						#3						#4					
#2																							
#3																							
#4																							

exhibit W-2

CLAIRTON WORKS
DOOR MAINTENANCE CARD

CLAIRTON WORKS

(Key punch Co. 1-4)

BOOK NO.

TYPE MATERIAL USED

CIRCLE ONE:
(Keypunch Col. 5)

CIRCLE ONE:
(Keypunch Col. 6)

CIRCLE ONE:
(Keypunch Col. 7)

CIRCLE ONE:
(Keypunch Col. 8)

X
C
I
E
B

1. Harbison Walker
2. Gen. Refr.
- 3.
- 4.
- 5.
- 6.
- 7.

SEALING RINGS

1. Stainless Steel
2. Carbon Steel
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

RETAINERS

1. Feb. 50 L
2. Feb. Bulb L
3. Feb. 50 L Not bent
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

DIAPHRAGMS

1. Stainless Steel
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

TYPE	MAINTENANCE PERFORMED
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
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91	91
92	92
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94	94
95	95
96	96
97	97
98	98
99	99
100	100

1. Service Sealing Rings	(Punch 9-12)
2. Replace Sealing Rings	(Punch 13-16)
3. Service Diaphragm	(Punch 17-20)
4. Replace Diaphragm	(Punch 21-24)
5. Replace Retainers	(Punch 25-28)
6. Reline -- (Brick)	(Punch 29-32)
7. Service Springs & Plgs.	(Punch 33-36)
8. Replace Springs & Plgs.	(Punch 37-40)
9. Svc. Chuck Door Casting	(Punch 41-44)
10. Repl. Chuck Door Casting	(Punch 45-48)
11. Svc. Chuck Door Face	(Punch 49-52)
12. Repl. Chuck Door Face	(Punch 53-56)
13. Svc. Chuck Dr. "A" Cast	(Punch 57-60)
14. Repl. Chuck Dr. "A" Cast	(Punch 61-64)
15. Service Latches	(Punch 65-68)
16. Replace Latches	(Punch 69-72)
17. Replace Top Hook	(Punch 73-76)
18. Replace Casting	(Punch 77-80)
19. Other (Specify)	

[illegible]

Figure 1 is a line graph showing the time course of the effect of 100 mg/kg of diazepam on the plasma concentration of diazepam in rats. The y-axis is labeled 'Plasma concentration (mg/ml)' and ranges from 0 to 1.0. The x-axis is labeled 'Time (h)' and ranges from 0 to 12. There are two data series: a solid line with open circles representing the control group and a dashed line with open circles representing the diazepam-treated group. The control group shows a steady decline from approximately 0.8 mg/ml at 0h to 0.2 mg/ml at 12h. The diazepam-treated group shows a much higher concentration, starting at approximately 0.8 mg/ml at 0h, peaking at approximately 0.9 mg/ml at 2h, and then declining to approximately 0.4 mg/ml at 12h. The difference between the two groups is most pronounced between 2 and 6 hours.

DATE:

12 X 8	8 X 4	4 X 12
SCHEDULE	SCHEDULE	SCHEDULE
SS	LOSS	LOSS
RUBBED	SCRUBBED	SCRUBBED
R NO.	CAR NO.	CAR NO.
REMAN	FOREMAN	FOREMAN

exhibit w-4

exhibit w-4

OFF. _____

VAC. _____

LABOR _____

6TH.....

16 HR. _____

S.A. _____

OFF. _____

VAC. _____

LABOR

6TH _____

16 HR. _____

S. A. _____

2025-06-14

6TH _____

16 HR. _____

S. A. _____

· DELAYS AND MACHINE REPAIRS

[illegible]